

Results of Double-Star Measures with the 8-inch Equatoreal at Windsor, N. S. Wales, in 1891. By J. Tebbutt.

Ref. No.	Star.	Observed Magnitude.	Approx. Place of Star.	Fraction of Year.	Position of Angle.	No. of Obs.	Distance.	No. of Obs.	Mag. Power.	Hour-Angles.	Weight, 1 to 5.
			R. A. h m	Dec. S. ° ' "			"			h m	
1	p Eridani	6, 6	1 36	56 45	...	...	7 30	10	170	2 30 E 2 15 E	5
2	"	6, 6	"	"	225.2	10	...	...	300	2 51 E 2 37 E	5
3	"	...	"	"	225.6	10	...	...	300	3 43 E 3 31 E	3
4	"	6, 6	"	"	225.6	10	...	...	...	2 37 E 2 21 E	5
5	"	6, 6	"	"	...	...	7 03	10	...	2 4 E 1 47 E	5
6	"	...	"	"	...	...	7 08	10	170	3 44 E 3 26 E	3
7	"	...	"	"	227.9	10	...	...	230	2 19 W 2 40 W	3
8	"	...	"	"	...	...	7 63	7	170	2 44 W 2 58 W	3
9	Lalande, 4219	8, 8	2 11	18 44	335.6	10	...	...	300	2 32 E 2 20 E	4
10	"	8, 8	"	"	337.2	10	...	...	230	2 20 E 2 5 E	4
11	α Centauri	...	14 32	60 23	205.8	10	...	...	300	2 56 E 2 43 E	4
12	"	...	"	"	207.6	10	...	...	230	0 52 W 1 9 W	2
13	"	...	"	"	205.9	10	...	...	230	2 29 E 2 20 E	4
14	"	...	"	"	...	...	19 10	10	170	1 51 E 1 34 E	3
15	"	...	"	"	...	...	19 40	10	170	1 0 E 0 40 E	2
16	"	...	"	"	205.4	10	...	...	300	0 36 E 0 0	3
17	"	...	"	"	205.0	10	...	...	230	0 47 E 0 38 E	3
18	"	...	"	"	...	...	18 91	10	170	0 38 E 0 14 E	3
19	"	...	"	"	...	...	19 09	10	170	0 25 E 0 12 E	3
20	"	...	"	"	207.5	10	...	...	300	4 8 W 4 22 W	3

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			R. A. h m	Dec. S. ° '							h m	h m	
21	α Centauri	...	14 32	60 23	.646	206° 1	10	...	...	500	3 2 W	3 25 W	4
22	"	...	"	"	.646	...	...	19° 85	6	170	3 31 W	3 52 W	3
23	"	...	"	"	.654	...	...	19° 41	10	170	1 35 W	2 3 W	2
24	"	...	"	"	.657	...	...	19° 43	10	170	1 34 W	1 54 W	3
25	"	...	"	"	.657	...	...	19° 61	5	170	2 47 W	2 57 W	4
26	"	...	"	"	.663	...	...	19° 23	5	170	1 25 E	1 7 E	.3
27	"	...	"	"	.663	...	...	19° 24	10	170	0 3 W	0 14 W	4
28	39 Ophiuchi	6, 8	17 11	24 8	.695	...	...	10° 57	5	170	3 21 W	3 36 W	...
29	"	...	"	"	.726	...	...	10° 53	7	170	2 45 W	2 59 W	...
30	"	...	"	"	.726	354° 9	10	...	...	300	3 21 W	3 43 W	...
31	"	...	"	"	.739	353° 8	10	...	...	140	2 40 W	2 51 W	5
32	κ Cor. Aust.	6, 7	18 26	38 48	.758	358° 3	6	...	...	...	3 29 W	3 39 W	5
33	Brisb. 6556	...	18 54	37 13	.635	277° 4	10	...	...	140	0 39 E	0 28 E	5
34	"	...	"	"	.638	280° 5	10	...	...	230	1 6 E	0 28 E	4
35	"	7, 7	"	"	.745	...	...	10° 15	8	170	2 15 W	2 39 W	5
36	"	7, 7	"	"	.745	280° 6	10	...	...	300	3 22 W	3 36 W	5
37	"	...	"	"	.747	281° 4	10	...	...	300	1 52 W	2 5 W	5
38	"	...	"	"	.750	280° 8	10	...	...	300	1 44 W	1 57 W	3
39	h 5075	8, 8	18 54	63 56	.758	110° 5	10	...	...	300	3 28 W	3 51 W	4
40	γ Cor. Aust.	...	18 59	37 13	.635	...	...	1° 57	10	170	3 7 E	1 52 E	4
41	"	...	"	"	.635	180° 1	10	...	...	300	1 36 E	1 17 E	4

Ref. No.	Star.	Observed Magnitude.	Approx. Place of Star.		Fraction of Year.	Position of Angle.	No. of Obs.	Distance.	No. Obs.	M g. Power.	Hour-Angles.		Weight, 1 to 5.
			R. A.	Dec. S.							h m	h m	
42	γ Cor. Aust.	...	18 59	37 13	·638	178°1	10	...	...	300	1 34 E	1 6 E	3
43	"	...	"	"	·643	177°3	10	...	...	300	1 44 E	1 24 E	5
44	"	6, 6	"	"	·739	174°7	10	...	...	300	1 42 W	1 54 W	5
45	"	6, 6	"	"	·739	...	...	1'48	10	170	2 26 W	2 38 W	5
46	"	...	"	"	·742	...	...	1'57	6	170	1 28 W	1 37 W	3
47	"	6, 6	"	"	·745	...	...	1'52	10	170	2 0 W	2 15 W	5
48	"	6, 6	"	"	·745	174°5	10	...	...	300	2 40 W	2 59 W	5
49	"	6, 6	"	"	·745	175°0	10	...	...	300	3 1 W	3 12 W	5
50	"	...	"	"	·747	175°3	10	...	...	300	1 29 W	1 42 W	5
51	"	...	"	"	·750	176°3	10	...	...	300	1 54 W	2 3 W	4
52	"	6, 6	"	"	·758	175°7	10	...	...	...	2 32 W	2 47 W	5

Remarks.

Nos. 1, 2, 4, 5, 6, 9, 10, 21, 22, 26, 27, 31, 33, 34, 39, 40, 43, 44, 45, 46, 47, 48, 49, 50, 52. The line joining the observer's eyes was parallel to that joining the components.  
Nos. 1, 4, 5, 34, 44, 45, 47, 48, 49, 52. Components equal.  
Nos. 7, 8. The driving clock acted badly, and the measures were difficult.  
Nos. 11, 13, 14, 15, 16, 17, 18, 19, 26, 27. Observations during sunlight.  
No. 28. Large star pale red and companion pale blue.  
Nos. 28, 29. Direct distances deduced from observed differences of declination and an assumed position-angle.  
No. 33. Components equal and bluish.  
No. 39. The preceding component probably the brighter.

Windsor, N. S. Wales :  
1892 January 22.

Nos. 9, 10. South component slightly the brighter.  
Nos. 23, 24. Observations in twilight.

Nos. 35, 36. The following star probably the brighter.

*Maxima and Minima of Variable Stars Observed during the Years  
1889, 1890, and 1891. By John Mitchell.*

The following results have been derived from observations made with an achromatic of 3·5 inches aperture, using constantly an eyepiece of low power.

The mode of observation has been to compare the variable with stars differing little from it in brightness, and whose magnitudes had been kindly supplied to me by Mr. Baxendell, who, I believe, determined some of them himself, and obtained the remainder from his late father and the late Mr. Pogson.

*R Cygni.*

Maximum: 1889 Oct. 9; mag. 7·1

*S Ursæ Majoris.*

Maximum: 1889 Sept. 15; mag. 7·6

Minimum: 1890 Jan. 1; „ 12·35

Maximum: 1890 Apr. 18; „ 7·6

Minimum: 1890 Aug. 20; „ 12·25

Minimum: 1891 Apr. 2 ±; „ ?

Maximum: 1891 July 13; „ 7·75

Minimum: 1891 Nov. 10; „ 12·45

*T Ursæ Majoris.*

Maximum: 1890 June 3; mag. 7·1

Maximum: 1891 Nov. 1; „ 7·85

Observations have been made as follows:—

	<i>R Cygni.</i>	<i>U Geminorum.</i>	<i>S Ursæ Majoris.</i>	<i>T Ursæ Majoris.</i>
In 1889	30 nights.	...	26 nights.	13 nights.
„ 1890	26 „	...	40 „	31 „
„ 1891	30 „	12 nights.	58 „	42 „

*Brockholes, Huddersfield:*  
1892 February 25.